

*Subj*

Cancel claims 1-25 and add new claims 26-49 as recited.

*NQ* | 10  
26. (New) An energy tracking system for a battery powered vehicle used in a vehicle sharing system including a plurality of vehicle ports comprising:

*E*  
a sensor installed on the vehicle for sensing the state of charge of at least one battery

5 a vehicle subsystem, including a wireless communication unit, installed in the vehicle and operatively coupled to the sensor, for transmitting information reflecting the state of charge of the at least one battery; and a central station including a computer system in wireless communication

with said wireless communication unit for receiving and processing information regarding the state of charge of the at least one battery.

27. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 26, wherein the central station comprises a display device and said processing state of charge information comprises displaying state of charge information

28. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 26, wherein the central station comprises a recording device and said processing state of charge information comprises recording state of charge

information.

29. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 26, wherein said central station comprises a computer programmed to compare a sensed state of charge with a previously sensed state of charge to generate a first signal in response to a change between compared states of charge greater than a predefined value.

30. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 26, wherein the vehicle subsystem further comprises:  
a display device installed on the vehicle;  
a processor operatively coupled to the display device and in wireless communication with the said computer system, and programmed to respond to a first signal from the computer system to display a first warning message on the display device.

31. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 26, wherein said central station comprises a computer programmed to determine whether the sensed state of charge is greater than a predefined minimum state of charge and to generate a second signal in response to the sensed state of charge being less than a predefined state of charge minimum value.

32. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 31, wherein the vehicle subsystem processor is further programmed to respond to the first signal from the computer system to display a warning on the display device.

33. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 26, wherein said central station comprises a computer programmed to determine whether the sensed state of charge is greater than a predefined minimum state of charge, and to generate a low state of charge signal in response to the sensed state of charge being less than the predefined state of charge.

5 34. (New) The energy tracking system for a battery powered vehicle used in a vehicle sharing system of claim 33, wherein the vehicle subsystem comprises:

a display device installed on the vehicle; a processor operatively coupled to the display device and in wireless communication with said computer system, and  
5 programmed to respond to a low state of charge message from the computer system, to display a warning message on the display device.

35. (New) A battery powered vehicle used in a vehicle sharing system including a plurality of vehicle ports, each vehicle having a battery to provide a source of electrical power, and defining state of charge at any given time, the system comprising:

- a sensor associated with and installed on each vehicle for sensing the state of charge of the associated vehicle;
- a vehicle subsystem including a wireless communication unit associated with and installed on each vehicle and operatively coupled to the sensor on the
- 5 associated vehicle for transmitting state of charge information corresponding to a state of charge sensed by the sensor;
- central station coupled in wireless communication with said wireless communication units, including a tracking system that provides vehicle location information corresponding to the location of each vehicle and a computer system for
- 10 receiving state of charge information transmitted by said wireless communication unit and programmed to process state of charge information and vehicle location information to select and allocate vehicles to users based on state of charge information and vehicle location information.
36. (New) The electrically powered vehicle sharing system of claim 35, wherein:
- the central station computer system is further programmed to define a vehicle search group for each port in which one or more vehicles from the fleet may be present at any given time; and
- 5 the central station computer system is programmed to select and allocate a vehicle for a user at a given port from the vehicle search group defined for that port.

37. (New) The electrically powered vehicle sharing system of claim 36, wherein the central station computer system is further programmed to process vehicle location information for a vehicle due to arrive at a given port, to provide an estimated time of arrival of the vehicle at that port and for including the vehicle in the vehicle search group for that port if the estimated time of arrival is within a predefined time period.

38. (New) The electrically powered vehicle sharing system of claim 35, wherein:

- each vehicle comprises an electric powered vehicle having a battery power source which defines the state of charge of the vehicle;
- each port includes a charging facility for selectively coupling to a vehicle to increase the SOC of the vehicle over a charging time period;
- said central station computer system is programmed to process vehicle location information and state of charge information to include a vehicle in the vehicle search group of a given port if the vehicle is located at a charging facility at the port and has a charging time period which is due to expire within a predefined time period.

39. (New) The electrically powered vehicle sharing system of claim 35, wherein:

- each vehicle comprises an electric powered vehicle having a battery power source which defines the state of charge of the vehicle;
- each port includes a charging facility for selectively coupling to a vehicle to

increase the state of charge of the vehicle over a charging time period;  
said central station computer system is programmed to process vehicle  
location information and state of charge information to select a vehicle located at a given  
port for coupling to the charging facility at that port, based on the state of charge  
5 information for the vehicle.

40. (New) The electrically powered vehicle sharing system of claim 35, wherein:  
each vehicle comprises an electric powered vehicle having a battery power  
source which defines the state of charge of the vehicle,  
each port includes a charging facility for selectively coupling to a vehicle to  
5 increase the state of charge of the vehicle over a charging time period;

said central station computer system is programmed to process vehicle  
location information and state o charge information for determining an charging order for  
a plurality of vehicles located at a port based on the state of charge of each vehicle in  
the plurality of vehicles.

41. (New) The electrically powered vehicle sharing system of claim 40, wherein said  
charging order is defined by the order of the state of charge of the vehicles, from the  
lowest state of charge to the highest state of charge.

42. (New) The electrically powered vehicle sharing system of claim 40, wherein:  
said charging facility defines a charging rate for each vehicle, wherein the  
charging rate comprises the vehicle's increasing state of charge over the charging  
period and wherein a plot of the charging rate of each vehicle includes a generally linear  
5 region below a first state of charge level and a generally nonlinear region above the first  
state of charge level;

said central station computer system is programmed to assign a vehicle to  
a charger if the state of charge of the vehicle is such that the charger will be operating in  
its linear charge region upon coupling to the vehicle.

43. (New) A method for tracking energy consumption in a battery powered vehicle  
used in a vehicle sharing system, including a plurality of vehicle ports, the method  
comprising: sensing the state of charge of the vehicle with a sensor installed on the  
vehicle;

5 transmitting state of charge information measured by said sensor with a  
wireless communication unit installed on the vehicle;

receiving and processing state of charge information transmitted by said  
wireless communication unit at a central station.

44. (New) The method for tracking energy consumption in a battery powered vehicle  
used in a vehicle sharing system of claim 43 wherein the vehicle is an electric powered

vehicle having a battery power source, and the step of sensing comprises determining the rate at which the battery charge is consumed.

45. (New) The method for tracking energy consumption in a battery powered vehicle used in a vehicle sharing system method of claim 43, wherein the step of processing state of charge information comprises displaying state of charge information on a display device at the central station.

46. (New) The method for tracking energy consumption in a battery powered vehicle used in a vehicle sharing system method of claim 43, wherein the step of processing state of charge information comprises recording state of charge information on a recording device at the central station.

47. (New) The method for tracking energy consumption in a battery powered vehicle used in a vehicle sharing system method as in claim 43, further comprising:

comparing a sensed state of charge with a previously sensed state of charge to generate a first signal in response to a change between compared states of charge greater than a predefined value; and

displaying a warning message on a display device installed on the vehicle, in response to the first signal.

48. (New) The method for tracking energy consumption in a battery powered vehicle used in a vehicle sharing system method as in claim 24, further comprising:

comparing a sensed state of charge with a predefined minimum state of charge and generating a second signal in when the sensed state of charge is less than a

- 5 predefined minimum state of charge value; and displaying a warning message on the display device installed on the vehicle, in response to the second signal.

49. (New) The method for tracking energy consumption in a battery powered vehicle used in a vehicle sharing system method as in claim 43, wherein

comparing a sensed state of charge with a predefined minimum state of charge and generating a low state of charge signal when a sensed state of charge is

- 5 less than a predefined minimum state of charge value; and

displaying a warning message on the display device installed on the vehicle, in response to the low state of charge signal.